

SITE: Virginia Carolina Chem.-ATL
BREAK: 2.9
OTHER: _____

United States Environmental Protection Agency
Region IV
POLLUTION REPORT

Date: Thursday, April 30, 2009

From: Gary Andrew, OSC

To: Tim Neal, ERRB

Subject: Removal Site Evaluation
VCC Atlanta
Atlanta, GA
Latitude: 33.7586
Longitude: -84.3325

POLREP No.:	1 Site #:	A4LJ
Reporting Period:	D.O. #:	
Start Date:	Response Authority:	CERCLA
Mob Date:	Response Type:	Time-Critical
Completion Date:	NPL Status:	Non NPL
CERCLIS ID #:	Incident Category:	Removal Assessment
RCRIS ID #:	Contract #	

Site Description

The Former VCC plant in Atlanta, Georgia was established by Virginia-Carolina Chemical Company near the turn of the 20th Century through the acquisition of three facilities: the former Virginia-Carolina Chemical Company Fertilizer Works facility; the former Clifton Chemical and Phosphate Company plant facility; and the former Kennesaw Guano Company plant facility. Prior to acquisition by Virginia Carolina Chemical Company, all three of these facilities produced sulfuric acid using the lead acid chamber process. Plant operations were conducted on the northern portion of the Site. The acid chambers from the three facilities were located across the breadth of the site from west to east. However, following acquisition by Virginia-Carolina Chemical Company, it appears that fertilizer manufacturing and acid production operations were eventually consolidated into the former VCC Fertilizer Works located on the northwestern portion of the Site. The Clifton Chemical and Phosphate Company facility was out of operation by 1892 and in ruins by 1899 before being acquired by VCC. The Kennesaw Guano Company operated a complete fertilizer plant until 1899, but by 1911 the lead acid chamber structure was removed and Virginia-Carolina Chemical Company was using the former mill and dumping pit for fertilizer storage. The site is currently occupied by a mix of residential, commercial, vacant, undeveloped, recreational and other types of properties. Adjacent properties are similar on all sides of the Site.

Exxon Mobil Corporation has come forth as the corporate successor of this and other VCC sites throughout Region 4.

Current Activities

Between September and November 2006, ExxonMobil's contractor, ARCADIS BBL, conducted a Preliminary Assessment/Site Inspection (PA/SI). Further Site delineation was conducted in June



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2008. The results were submitted to EPA for review in a Site Delineation Report/Removal Action Work Plan (SDR/RAWP) in February 2009.

Arsenic and lead were detected in many of the soil samples collected from the Site at concentrations above the screening levels of 27 mg/kg and 400 mg/kg, respectively, used for the PA/SI. Arsenic and/or lead were detected above the screening levels in two distinct areas at the Site. The largest contiguous area containing elevated concentrations of arsenic and/or lead is located in the north-central portion of the site near the approximate location of the former fertilizer structures. The second area, located in the northeast corner of the Site, contains only one soil boring with arsenic and lead concentrations above the screening levels. The maximum detected concentrations of arsenic and lead were 1,260 mg/kg and 2,660 mg/kg, respectively.

In February 2009, the site was forwarded to the EPA Region 4 Emergency Response and Removal Branch (ERRB) for consideration using CERCLA removal authorities. On May 1, 2009, ERRB completed a review of the site information and concluded that the site meets the criteria as set forth in 40 CFR 300.415 (b) (2) for a time-critical removal action.

Planned Removal Actions

Arsenic and lead are both hazardous substances, listed in the Title 40 of the Code of Federal Regulations (CFR) Section 302.4, as referred to in Section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended. Arsenic and lead contaminated soils at the Site pose a significant threat to public health. The threat comes primarily from potential human exposure to these hazardous substances. Direct contact and ingestion of these hazardous substances are the primary pathways of exposure. Continued release of these hazardous substances may cause potential chronic health effects to persons living nearby.

Arsenic and lead present in on-site surface and subsurface soils pose the following threats to public health or welfare as listed in Section 300.415 (b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

Section 300.415 (b)(2)(i) "Actual or potential exposure to nearby human populations, or the food chain from hazardous substances pollutants or contaminants."

The SDR / RAWP disclosed that there is significant lead and arsenic contamination that is closely associated with the locations of the former lead acid chambers on the Site. EPA Region 4 Technical Services Section (TSS) recommends a removal action level of 400 ppm lead and 40 ppm arsenic for generic residential exposure scenarios. Concentrations exceeding these levels at VCC-Atlanta were confirmed through on-site XRF analysis and laboratory analysis. The maximum lead concentration detected in surface soils in was 2,660ppm, and the maximum arsenic concentration in surface soils was 1,260 ppm.

There are residences and commercial properties currently located within the footprint of the former phosphate fertilizer production facility, now known as the VCC-Atlanta Site. Potential human exposure to site related contaminants may occur via inhalation of wind borne dust, inadvertent ingestion of contaminated soil, and direct contact with the contaminated surface soils.

- Section 300.415 (b)(2)(iv) "High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate."

Analytical results reveal that high lead and arsenic levels are present at or near the surface creating

a potential for migration to off-site locations. Lead and arsenic concentrations exceeding the RALs of 400 ppm and 40 ppm, respectively, were confirmed through on-site XRF analysis and laboratory analysis. The maximum lead concentration detected in surface soils in was 2,660 ppm, and the maximum arsenic concentration in surface soils was 1,260 ppm.

The Site is adjacent to a branch of Sugar Creek, which forms the western boundary of the property. The area of the site immediately up gradient from the creek is the largest contiguous area exhibiting arsenic and lead concentrations above the RALs, creating the potential for site contaminants to migrate to Sugar Creek through drainage pathways.

- Section 300.415 (b)(2)(v) "Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released."

Several areas throughout the Site are void of vegetation making them susceptible to wind and surface water runoff during heavy rain events which are common in this geographical area. Such events may contribute to the migration of lead and arsenic into nearby water bodies, including Sugar Creek.

Due to the threat and/or future threat to human health from the hazardous substance, the Site achieves removal eligibility base on the removal criteria listed above.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
Intramural Costs				
Total Site Costs	\$0.00	\$0.00	\$0.00	0.00%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.